

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the importance of dynamic web content in modern web applications and how it impacts user experience.
 17. Explain the process of installing applications in Linux and how package managers facilitate this task.
 18. Explain how the SELECT, INSERT, UPDATE, and DELETE statements function and their roles in data manipulation.
 19. Explain how functions are defined and invoked in PHP, including the benefits of using functions for code organization.
 20. Examine security practices when accessing databases with PHP, including prepared statements and escaping inputs to prevent SQL injection.
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NOVEMBER/DECEMBER 2025

BSC61 — OPEN SOURCE PROGRAMMING

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. How does JavaScript enhance the interactivity of web pages?
2. What is the purpose of the HTML5 <canvas> element?
3. Describe the basic concept of the Linux file system.
4. What are standard files in Linux, and what types exist?
5. What is MySQL, and what role does it play in database management?
6. How do you use the SHOW DATABASES command in MySQL?



7. What is PHP, and what is its primary use in web development?
8. Describe the general syntactic characteristics of PHP.
9. What is form processing in PHP, and why is it important?
10. How can you access files and folders using PHP?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Analyze the request and response procedure in HTTP and its significance in client-server communication.

Or

- (b) Compare the advantages of using PHP, JavaScript, CSS and HTML5 in web development.

12. (a) Explore the different types of shells available in Linux and their features.

Or

- (b) Discuss how to investigate and manage processes in Linux, including tools and commands used.

13. (a) Analyze the security features in MySQL that protect data integrity and user access.

Or

- (b) Examine how MySQL handles transactions and the importance of ACID properties in database operations.

14. (a) Discuss the role of control statements (if, switch, loops) in managing the flow of a PHP script.

Or

- (b) Analyze the different types of arrays in PHP (indexed, associative, and multidimensional) and their applications.

15. (a) Analyze the different methods for selecting records from a MySQL database and their implications for performance.

Or

- (b) Discuss the techniques for updating records in a MySQL database with PHP, including handling potential errors.